WHAT IS CLAIMED IS:

1. A composition for cellular therapy, comprising:

a plurality of encapsulating devices comprising a polyethylene glycol (PEG) coating, said PEG having a molecular weight between about 900 and about 3,000 Daltons; and

a plurality of cells encapsulated in the encapsulating devices, wherein said composition has a cell density of at least about 100,000 cells/ml.

2. The composition of claim 1, wherein the encapsulating devices are microcapsules.

3. The composition of claim 2, wherein the microcapsules are conformally coated cell aggregates.

4. The composition of claim 3, wherein the cell aggregates are pancreatic islets.

5. The composition of claim 4, wherein the cell density is at least about 6,000,000 cells/ml.

6. The composition of claim 1, where the cell is selected from the group consisting of neurologic, cardiovascular, hepatic, endocrine, skin, hematopoietic, immune, neurosecretory, metabolic, systemic, and genetic.

7. The composition of claim 6, where the cell is selected from the group consisting of autologous, allogeneic, xenogeneic and genetically-modified.

8. The composition of claim 7, where the endocrine cell is an insulin producing cell.

9. A therapeutically effective composition comprising a plurality of encapsulating devices having an average diameter of less than 400 μm, said encapsulating devices comprising encapsulated cells in an encapsulation material, wherein the composition comprises at least about 500,000 cells/ml.

10. The therapeutically effective composition of claim 9, wherein the average diameter of the encapsulating device is less than 300 micron.

11. The therapeutically effective composition of claim 9, wherein the average diameter of the encapsulating device is less than 200 micron.

12. The therapeutically effective composition of claim 9, wherein the average diameter of the encapsulating device is less than 100 micron.

13. The therapeutically effective composition of claim 9, wherein the average diameter of the encapsulating device is less than 50 micron.

14. A therapeutically effective composition comprising a plurality of encapsulating devices having an average diameter of less than 400 μm, said encapsulating devices comprising encapsulated cells in an encapsulation material, wherein the composition comprises a ratio of volume of encapsulating device to volume of cells of less than about 20:1.

15. The therapeutically effective composition of claim 14, wherein the composition comprises a ratio of volume of encapsulating device to volume of cells of less than about 10:1.

16. The therapeutically effective composition of claim 14, wherein the composition comprises a ratio of volume of encapsulating device to volume of cells of less than about 2:1.

17. A method of using the therapeutic composition of claim 1, comprising implanting said composition into an implantation site in an animal in need of treatment for a disease or disorder.

18. The method of claim 17, where the disease or disorder is selected from the group consisting of neurologic, cardiovascular, hepatic, endocrine, skin, hematopoietic, immune, neurosecretory, metabolic, systemic, and genetic.

19. The method of claim 18, wherein the endocrine disease is diabetes.

20. The method of claim 17, wherein the animal is from an Order of Subclass Theria selected from the group consisting of Artiodactyla, Carnivora, Cetacea, Perissodactyla, Primate, Proboscides, and Lagomorpha.

21. The method of claim 20, where the primate is a Human.

22. The method of claim 17, where the implanting is an injection.

23. The method of claim 20, where the implantation site is selected from the group consisting of subcutaneous, intramuscular, intraorgan, arterial/venous vascularity of an organ, cerebro-spinal fluid, and lymphatic fluid.

24. The method of claim 23, where the implantation site is subcutaneous.

25. The method of claim 24, further comprising implanting encapsulated islets in a subcutaneous implantation site.

26. The method of claim 17, further comprising administering an immunosuppressant or anti-inflammatory agent.

27. The method of claim 26, where the immunosuppressant or anti-inflammatory agent is administered for less than 6 months.

28. The method of claim 27, where the immunosuppressant or anti-inflammatory agent is administered for less than 1 month.

29. A method of using the therapeutic composition of claim 9, comprising implanting said composition into an implantation site in an animal in need of treatment for a disease or disorder.

30. The method of claim 29, where the disease or disorder is selected from the group consisting of neurologic, cardiovascular, hepatic, endocrine, skin, hematopoietic, immune, neurosecretory, metabolic, systemic, and genetic.

31. The method of claim 30, wherein the endocrine disease is diabetes.

32. The method of claim 29, wherein the animal is from an Order of Subclass Theria selected from the group consisting of Artiodactyla, Carnivora, Cetacea, Perissodactyla, Primate, Proboscides, and Lagomorpha.

33. The method of claim 32, where the primate is a Human.

34. The method of claim 29, where the implantation is an injection.

35. The method of claim 29, where the implantation site is selected from the group consisting of subcutaneous, intramuscular, intraorgan, arterial/venous vascularity of an organ, cerebro-spinal fluid, and lymphatic fluid.

36. The method of claim 35, where the implantation site is subcutaneous.

37. The method of claim 36, further comprising implanting encapsulated islets in a subcutaneous implantation site.

38. The method of claim 29, further comprising administering an immunosuppressant or anti-inflammatory agent.

39. The method of claim 38, where the immunosuppressant or anti-inflammatory agent is administered for less than 6 months.

40. The method of claim 39, where the immunosuppressant or anti-inflammatory agent is administered for less than 1 month.

41. A method of encapsulating a biological material comprising:

a) adding a solution comprising a first buffer to the biological material;

b) centrifuging the biological material to form a pelleted biological material;

c) removing supernatant;

d) adding a solution comprising a photoinitiator dye conjugated to a cell adsorbing material to the pelleted biological material;

e) resuspending and incubating the pelleted biological material with the solution comprising the photoinitiator dye conjugated to the cell adsorbing material for an effective amount of time;

f) centrifugating mixture;

g) removing the solution comprising the photoinitiator dye conjugated to the cell adsorbing material;

h) resuspending the pelleted biological material with a second solution comprising a second buffer;

i) centrifugating and removing the second buffer;

j) resuspending and mixing the biological material with a photoactive polymer solution; and

k) irradiating the resuspended biological material with a photoactive polymer solution with an energy source to form an encapsulated biological material.

42. The method of claim 41, where the cell adsorbing material is a polycationic polymer.

43. The method of claim 42, where the polycationic polymer is a PAMAM Dendrimer.

44. The method of claim 42, where the polycationic polymer is poly(ethyleneimine).

45. The method of claim 41, wherein the biological material is an organ, tissue or cell.

46. The method of claim 45, wherein the tissue is a cluster of insulin producing cells.

47. The method of claim 46, wherein the cell is an insulin producing cell.

48. The method of claim 41, wherein the encapsulated biological material is a PEG conformal coated islet allograft.

49. The method of claim 41, wherein the first and second buffer is 1 to 200 mM.

50. The method of claim 49, wherein the first and second buffer is 10 to 50 mM.

51. The method of claim 50, wherein the first and second buffer is 20 mM.

52. The method of claim 41, wherein the photoinitiator is selected from the group consisting of carboxyeosin, ethyl eosin, eosin Y, fluorescein, 2,2-dimethoxy,2-phenylacetophenone, 2-methoxy, 2-phenylacetophenono, camphorquinone, rose bengal, methylene blue, erythrosin, phloxine, thionine, riboflavin and methylene green.

53. The method of claim 52, wherein the photoinitiator is carboxyeosin.

54. The method of claim 41, where the photoactive polymer solution comprises a polymerizable high density ethylenically unsaturated PEG and a sulfonated comonomer.

55. The method of claim 54, where the polymerizable high density ethylenically unsaturated PEG is a polymerizable high density acrylated PEG.

56. The method of claim 55, where the polymerizable high density acrylated PEG has a molecular weight of 1.1 kD.

57. The method of claim 54, where the sulfonated comonomer is selected from the group consisting of 2-acrylamido-2-methyl-1-propanesulfonic acid, vinylsulfonic acid, 4-styrenesulfonic acid, 3-sulfopropyl acrylate, 3-sulfopropyl methacrylate, and n-vinyl maleimide sulfonate.

58. The method of claim 57, where the sulfonated comonomer is 2-acrylamido-2-methyl-1-propanesulfonic acid.

59. The method of claim 54, wherein the photoactive polymer solution further comprises a cocatalyst selected from the group consisting of triethanolamine, triethylamine, ethanolamine, N-methyl diethanolamine, N,N-dimethyl benzylamine, dibenzyl amino, N-benzyl ethanolamine, N-isopropyl benzylamine, tetramethyl ethylenediamine, potassium persulfate, tetramethyl ethylenediamine, lysine, ornithine, histidine and arginine.

60. The method of claim 59, where the cocatalyst is triethanolamine.

61. The method of claim 54, wherein the photoactive polymer solution further comprises an accelerator selected from the group consisting of N-vinyl pyrrolidinone, 2-vinyl pyridine, 1-vinyl imidazole, 9-vinyl carbazone, 9-vinyl carbozol, acrylic acid, n-vinylcarpolactam, 2-allyl-2-methyl-1,3-cyclopentane dione, and 2-hydroxyethyl acrylate.

62. The method of claim 61, where the accelerator is N-vinyl pyrrolidinone.

63. The method of claim 54, wherein the photoactive polymer solution further comprises a viscosity enhancer selected from the group consisting of natural and synthetic polymers.

64. The method of claim 63, where the viscosity enhancer is selected from the group consisting of 3.5kD PEG-triol and 4kD PEG-diol.

65. The method of claim 54, wherein the photoactive polymer solution further comprises a density adjusting agent.

66. The method of claim 65, where the density adjusting agent is selected from the group consisting of Nycodenz and Ficoll.

67. The method of claim 54, wherein the photoactive polymer solution further comprises a "Good" buffer.

68. The method of claim 67, where the "Good" buffer is selected from the group consisting of HEPES and MOPS.

69. The method of claim 68, where the "Good" buffer is MOPS.

70. The method of claim 54, where the energy source is an Argon laser.

71. The method of claim 41, where the biological material is selected from the group consisting of neurologic, cardiovascular, hepatic, endocrine, skin, hematopoietic, immune, neurosecretory, metabolic, systemic, and genetic.

72. The method of claim 41, where the biological material is from an animal of Subclass Theria of Class Mammalia.

73. The method of claim 72, where the animal is from an Order of Subclass Theria selected from the group consisting of Artiodactyla, Carnivora, Cetacea, Perissodactyla, Primate, Proboscides, and Lagomorpha.

74. The method of claim 73, where the primate is a Human.

75. A composition for encapsulating biological material comprising a polymerizable high density ethylenically unsaturated PEG having a molecular weight between 900 and 3,000 Daltons, and a sulfonated comonomer.

76. The composition of claim 75, where the polymerizable high density ethylenically unsaturated PEG is a high density acrylated PEG.

77. The composition of claim 76, where the polymerizable high density acrylated PEG has a molecular weight of 1.1 kD.

78. The composition of claim 75, where the sulfonated comonomer is selected from the group consisting of 2-acrylamido-2-methyl-1-propanesulfonic acid, vinylsulfonic acid, 4-styrenesulfonic acid, 3-sulfopropyl acrylate, 3-sulfopropyl methacrylate, and n-vinyl maleimide sulfonate.

79. The composition of claim 78, where the sulfonated comonomer is 2-acrylamido-2-methyl-1-propanesulfonic acid.

80. The composition of claim 75, further comprising a cocatalyst selected from the group consisting of triethanolamine, triethylamine, ethanolamine, N-methyl diethanolamine, N,N-dimethyl benzylamine, dibenzyl amino, N-benzyl ethanolamine, N-isopropyl benzylamine, tetramethyl ethylenediamine, potassium persulfate, tetramethyl ethylenediamine, lysine, ornithine, histidine and arginine.

81. The composition of claim 80, where the cocatalyst is triethanolamine.

82. The composition of claim 75, further comprising an accelerator selected from the group consisting of N-vinyl pyrrolidinone, 2-vinyl pyridine, 1-vinyl imidazole, 9-vinyl carbazone,

9-vinyl carbozol, acrylic acid, n-vinylcarpolactam, 2-allyl-2-methyl-1,3-cyclopentane dione, and 2-hydroxyethyl acrylate.

83. The composition of claim 82, where the accelerator is N-vinyl pyrrolidinone.

84. The composition of claim 75, wherein the composition is biocompatible with a score of at least about a "2".

85. The composition of claim 84, wherein the composition is biocompatible in a mammal.

86. The composition of claim 85, wherein the composition is biocompatible in a sub-human primate.

87. The composition of claim 86, wherein the composition is biocompatible in a human.

88. The composition of claim 75, wherein the composition has the quality of permselectivity.

89. The composition of claim 88, wherein the permselectivity can be engineered by manipulating the composition.

90. The composition of claim 75, wherein the composition has an allowance of cell functionality with a score of at least about a "2".

91. The composition of claim 90, wherein the composition has the allowance of cell functionality in a mammal.

92. The composition of claim 91, wherein the composition has the allowance of cell functionality in a sub-human primate.

93. The composition of claim 92, wherein the composition has the allowance of cell functionality in a human.

94. The composition of claim 75, which is biodegradable.

95. The composition of claim 94, which is biodegradable in a mammal.

96. The composition of claim 95, which is biodegradable in a sub-human primate.

97. The composition of claim 96, which is biodegradable in a human.